REMARKS

Claims 1-20 are all the claims pending in the application. Applicant amends claims 3, 4, 11 and 12.

Formal matters

Applicant submits that the Examiner has not indicated if the certified copy of the priority document has been received. Therefore, Applicant respectfully requests the Examiner to mark the appropriate box in the next Office Action.

Applicant notes that the Examiner has stated in page 2 of the Office Action that claims 1-2, 5-10 and 13-20 are cancelled from further prosecution. Applicant submits that Applicant's election of species II, Figs. 9-and 11, readable on claims 3, 4, 11 and 12 does not cancel the other claims 1-2, 5-10 and 13-20 from the application, but instead the claims are merely withdrawn from further prosecution.

Claim Rejections under 35 U.S.C. § 102

Claims 3, 4, 11 and 12 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Wilkins et al. (US 6,226,353, hereafter "Wilkins"). Applicant traverses the rejections at least for the following reasons.

Claim 3

Claim 3 recites, *inter alia*, "calculating a Laplacian pf phase on the basis of said differential coefficient and any one of said plural sets of detection data and performing inverse Laplacian computation on the Laplacian of phase to obtain the phase information." Applicant submits the Wilkins does not disclose this unique feature recited in claim 3.

Wilkins is directed to an apparatus and a method of phase retrieval in phase contrast

imaging. Wilkins discloses storing intensity values from each record and utilizing these values

and any predetermined uniform boundary conditions to derive a grid of values defining an image

of the phase change introduced by the object in the penetrating radiation (column 3, lines 57-62).

Specifically, Wilkins discloses that the grid of values, defining an image of the phase

change, is derived by solving a **differential transport-of-intensity equation (TIE)** (column 4,

lines 15-17). Moreover, Wilkins discloses the differential TIE to be similar to the plane-wave

TIE with some differences. Furthermore, the differential TIE is derived from applying a

stationary phase formula (9) to a fresnel integral (7) (column 10, lines 39-64).

However, Wilkins does not disclose calculating a value of a **Laplacian of phase**; and

performing **inverse Laplacian computation** on the Laplacian of phase to obtain said phase

restoration information. Wilkins does perform a calculation of a distribution of the phase

Laplacian; but this calculation is only for comparison to scaled intensity distribution, as

explained at column 17, lines 43-53 with regard to FIGS. 5 and 6.

In view of the above, Applicant submits that deriving of the grid of values defining an

image of the phase change using the intensity values and predetermined uniform boundary

condition as disclosed in Wilkins is different from the claimed invention as defined in claim 3.

The use of the **Laplacian of phase and the inverse Laplacian calculation** to obtain phase

restoration are not disclosed in Wilkins. Therefore, Applicant respectfully requests the Examiner

to withdraw the rejection of claim 3, at least for the reasons given above.

Claim 4

Applicant submits that claim 4 depends from independent claim 3, and therefore is allowable at least by virtue of its dependency.

Claim 11

Claim 11 now recites, *inter alia*, a difference processing means for obtaining a differential coefficient between the plural sets of detection data, a Laplacian processing means for calculation a <u>Laplacian of phase</u> on the basis of the differential coefficient and an <u>inverse Laplacian processing means</u> for performing inverse Laplacian on the Laplacian of phase to obtain phase restoration.[1]

Applicant submits that Wilkins discloses a computer means M derives the grid of values by solving a differential transport-of-intensity equation (TIE) (column 7, lines 46-52), as noted above with respect to claim 3. Moreover, Wilkins discloses the differential TIE to be similar to the plane-wave TIE. Furthermore, the differential TIE is derived from applying a stationary phase formula (9) to a fresnel integral (7) (column 10, lines 39-64). Notwithstanding the mention of Laplacian processing in Wilkins, it is not the processing as claimed to restore phase.

In view of the above, Applicant submits that the derivation of grid of values by solving **differential TIE** taught in Wilkins is different from the limitations **the Laplacian processing means and the inverse Laplacian processing means** of the claimed invention as currently defined by claim 11. Therefore, Applicant respectfully requests the Examiner to withdraw the rejection of claim 11.

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[1] See description on page 34, lines 16-25.

Claim 12

Applicant submits that claim 12 depends from claim 11, and therefore is allowable by virtue of its dependency.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.
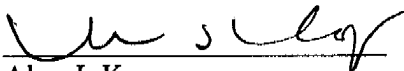
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